## REMARKS

The Applicant and the undersigned thank Examiner Pham for his time and consideration give during the telephonic interview that was conducted on June 16, 2005. The Applicant also appreciates Examiner Pham's careful review of this application. Claims 31-50 and 61-65 have been rejected while Claims 51-60 have been withdrawn from consideration by the Examiner in view of a restriction requirement. Upon entry of this amendment, Claims 1-30 and 51-60 have been cancelled, leaving Claims 31-50 and 61-78 pending in this application.

The pending independent claims are Claims 31, 42, 61, 66, and 74. Consideration of the present application is respectfully requested in light of the above amendments to the application and in view of the following remarks.

### Summary of Telephonic Interview of June 16, 2005

The Applicant and the undersigned thank the Examiner for his time and consideration given during the telephonic interview of June 16, 2005. During this telephonic interview, a proposed amendment to the claims was discussed. The Applicant provided the proposed amendment to the claims in advance of the interview.

The Applicant explained that U.S. Patent No. 6,490,581, issued in the name of Neshatfar et al. (hereinafter, the "Neshatfar reference") does not provide any teaching of positioning second, third, and fourth images that comprise health language concept objects in locations around a first image such that the first image comprises a geometrical center relative to all symbols present in a first area, as recited in amended independent Claim 1. The Applicant explained that the Neshatfar reference describes a conventional file tree system that does not provide the unique display as claimed.

Examiner Pham agreed that the proposed amendment would likely overcome the prior art applied in the Examiner's rejections. However, the Examiner suggested that the Applicant amend the claims to include language that describes navigation with the uniquely claimed display. The Applicant notes that each independent claim has been amended to include navigation using the unique display. Specifically, the Applicant has amended each independent claim to include displaying an editable text list in response to navigation in the unique display.

-15-

Application Serial No. 09/829,461

The Applicant and the undersigned request Examiner Pham to review this interview summary and to approve it by writing "Interview Record OK" along with his initials and the date next to this summary in the margin as discussed in MPEP § 713.04, p. 700-202.

Claim Rejections under 35 U.S.C. §103(a)

The Examiner rejected Claims 31, 33, and 35-41 under 35 U.S.C. § 102(e) as being anticipated by the Neshatfar reference. The Examiner rejected Claim 32 under 35 U.S.C. § 103(a) as being obvious in view of the Neshatfar reference.

The Examiner rejected Claim 34 under 35 U.S.C. § 103(a) as being obvious over the Neshatfar reference in view of a printed publication entitled, "Java Interface to Human Anatomy Knowledge" authored by Pietro Cerveri et al. and published in the year 2000 (hereinafter the "Cerveri" reference). The Examiner rejected Claims 42, 43, and 50 under 35 U.S.C. § 103(a) as being obvious over the Neshatfar reference in view of U.S. Patent No. 6,618,733 issued in the name of White et al. (hereinafter, the "White reference").

The Examiner rejected Claims 44 and 45 under 35 U.S.C. § 103(a) as being obvious over the Neshatfar reference in view of the White reference and the Cerveri reference. The Examiner rejected Claims 46-49 under 35 U.S.C. § 103(a) as being obvious over the Neshatfar reference in view of the White reference, the Cerveri reference, and further in view of U.S. Pat. No. 5,325,293 issued on June 28, 1994 in the name of Dorne (hereinafter, the "Dorne" reference).

The Examiner rejected Claims 61, 62, and 64-73 under 35 U.S.C. § 103(a) as being obvious over the Cerveri reference in view of the White reference. The Examiner rejected Claim 63 under 35 U.S.C. § 103(a) as being obvious over the Cerveri reference in view of the White reference in view of the Dorne reference.

The Applicant respectfully offer remarks to traverse these pending rejections. The Applicant will address each independent claim separately as the Applicant believes that each independent claim is separately patentable over the prior art of record.

-16-

Independent Claim 31

The rejection of Claim 31 is respectfully traversed. It is respectfully submitted that the Neshatfar, Cerveri, White, and Dorne references fail to describe, teach, or suggest the combination of (1) selecting a health language concept object stored in the multi-level data structure; (2) displaying a first image in a central region of first area, the first image comprising the selected health language concept object; (3) displaying one or more second images above the first image and along one or more respective geometrical rays originating from a central region of the first image, (4) each second image comprising a health language parent concept object of the selected health language concept object; (5) displaying a first symbol along each respective geometrical ray originating from the central region of the first image and illustrating an association between each second image to the first image; (6) if the selected health language concept object has one or more child concept objects, displaying one or more third images below the first image and along one or more respective geometrical rays originating from a central region of the first image, (7) each third image comprising one of the child concept objects of the selected health language concept object, and displaying a second symbol along each respective geometrical ray originating from the central region of the first image and illustrating an association between each third image and the first image; (8) if the selected health language concept object has one or more lateral concept objects, displaying one or more fourth images along one or more respective geometrical rays originating from the central region of the first image, (9) each fourth image comprising a lateral concept object of the selected health language concept object, and (10) displaying a third symbol along each respective geometrical ray originating from the central region of the first image and illustrating an association between each fourth image and the first image; (11) positioning all second, third, and fourth images in locations around the first image such that the first image comprises a geometrical center relative to all symbols present in the first area; and (12) displaying an editable text list in a second area in response to objects selected in the first area, the text list comprising information relating to at least one of a selected health language concept object, parent concept object, child concept object, and a lateral concept object, as recited in amended Claim 31.

-17-

Application Serial No. 09/829,461

## The Neshatfar Reference

Figure 5 of the Neshatfar reference illustrates one example of graphical user interface presenting information. When a user selects or "clicks on" a desired object such as CFamily 510, additional attributes connected by a line are displayed. For example, when the CFamily object 510 is selected, attributes of the object are shown in a new window CFamily father/CPerson 515. See Figure 5 of the Neshatfar reference below.



FIG. 5
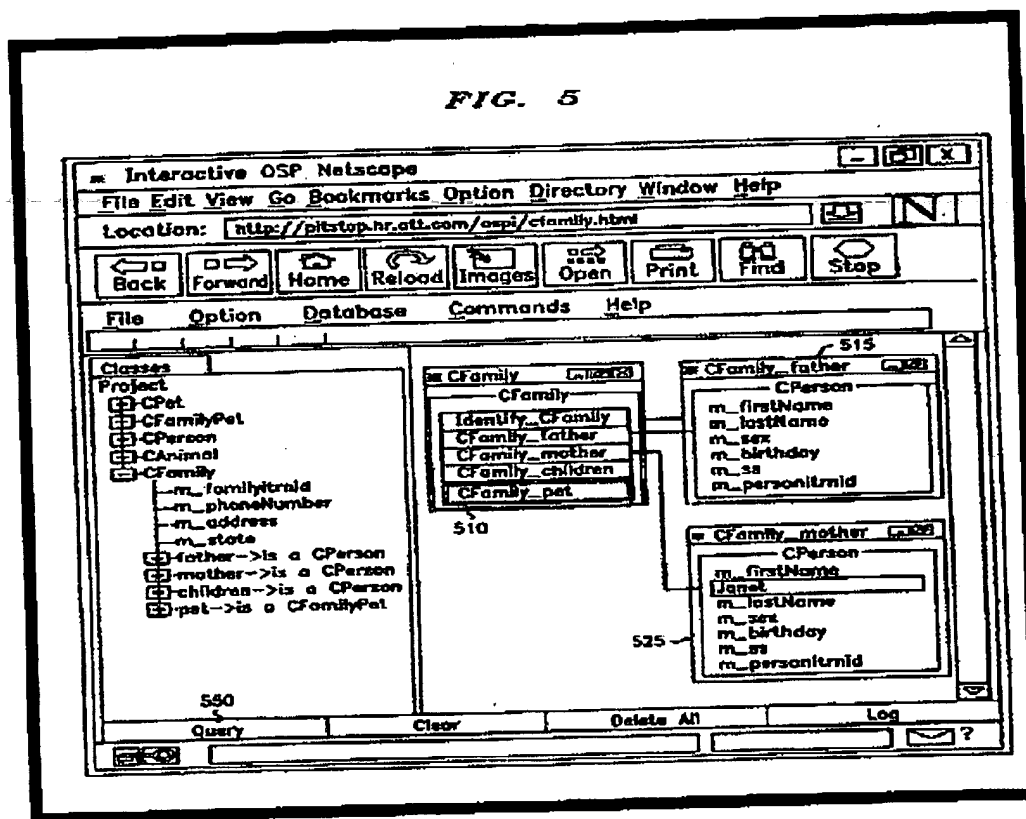
As another example, if the CFamily mother object is selected, additional attributes of this object are shown in a new window CFamily/CPerson 525. If the field "m_firstname" field is selected, a user can enter data such as the name "Janet" as illustrated in Figure 5 of the Neshatfar reference. See the Neshatfar reference, column 8, lines 33-57.

The Neshatfar reference only illustrates a database that describes family relationships and interests of particular family members. The background of the
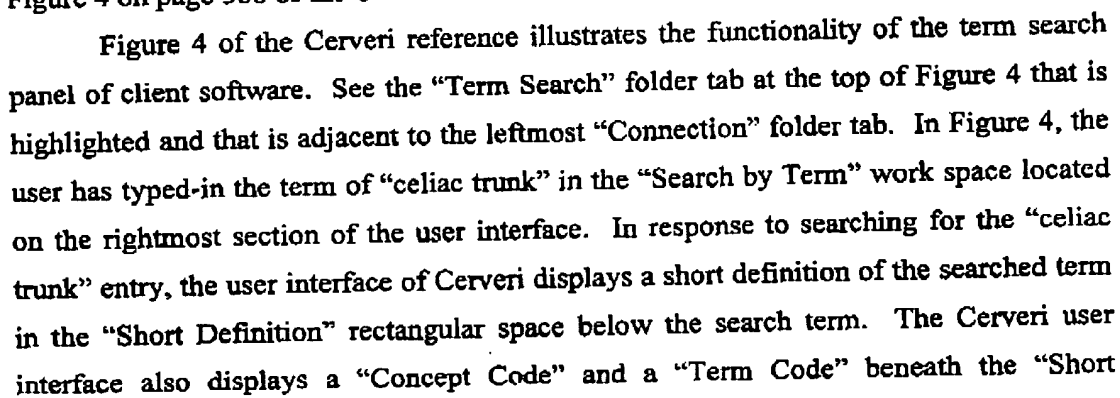
-18-

Neshatfar reference does mention the use of its technology with tracking employees of an organization. See the Neshatfar reference, column 1, lines 20-30.

The Neshatfar reference does not provide any teaching of positioning all second, third, and fourth images in locations around the first image such that the first image comprises a geometrical center relative to all symbols present in the first area; and displaying an editable text list in a second area in response to objects selected in the first area, the text list comprising information relating to at least one of a selected health language concept object, parent concept object, child concept object, and a lateral concept object, as recited in amended independent Claim 31.


The Cerveri Reference

The Cerveri reference describes a database accessible over the Internet in which anatomical concepts have been organized into a hierarchical framework. The system permits term queries that allow retrieving concepts containing or exactly matching a submitted keyword. The system provides a semantic access to anatomical information through using a client application that accesses a server over the internet. See the abstract of the Cerveri reference, page 384.

-19-

Figure 4 of the Cerveri reference reproduced above illustrates client software in which a user can access anatomical terms stored on central server through user-defined keywords that are mapped to a synonyms table into an anatomy knowledge database. The Cerveri reference explains that user can directly retrieve terms belonging either to a specific body region or body system. The Cerveri reference explains that taxonomic classification and synonyms can be obtained by picking a term into a retrieved list. See the caption of Figure 4 on page 388 of the Cerveri reference.

Figure 4 of the Cerveri reference illustrates the functionality of the term search panel of client software. See the "Term Search" folder tab at the top of Figure 4 that is highlighted and that is adjacent to the leftmost "Connection" folder tab. In Figure 4, the user has typed-in the term of "celiac trunk" in the "Search by Term" work space located on the rightmost section of the user interface. In response to searching for the "celiac trunk" entry, the user interface of Cerveri displays a short definition of the searched term in the "Short Definition" rectangular space below the search term. The Cerveri user interface also displays a "Concept Code" and a "Term Code" beneath the "Short

-20-

Definition" rectangular space that is associated with the searched term of "celiac trunk." See Figure 4 of Cerveri reproduced above.

In addition to displaying the "Concept Code" and "Term Code," the Cerveri user interface produces and displays a synonyms table of an Anatomy Knowledge Database in which the searched term is mapped. Specifically, a list of anatomical instances that satisfy the submitted query is presented as a table result in which each instance is associated to a body region and a functional system. See the Cerveri reference, second column, last paragraph, page 387; the "Retrieved Concepts 110" table that includes three columns titled, "English Term," "Body System," and "Body Region." For the searched term "celiac trunk" as illustrated in Figure 4, the term is listed in an "English Term" column of the table. Its corresponding term in the "Body System" column is "cardio vascular syst." and its corresponding term in the "Body Region" column is "abdomen."

If a term in the "English Term" column is further selected, another window containing additional information about the search term can be displayed by the Cerveri user interface. For example, when the search term "celiac trunk" is further selected from the "English Term" column, the Cerveri user interface can display a taxonomic hierarchy in a new window for this term. See Figure 4 of the Cerveri interface and the new window titled, "Is-a hierarchy for celiac trunk."

As illustrated in Figure 4, the Cerveri reference provides a user interface that displays information about concepts in tables and conventional text listed in rectangular windows. Opposite to the Cerveri reference, the invention of amended Claim 31 describes the display of images comprising concept concepts with specific geometrical relationships of a first area that cannot be characterized as tables or conventional text listed in rectangular windows.

Amended independent Claim 31 describes a selected concept object and how other related concept objects are positioned in predetermined areas around the concept object based on the relationship of a concept object to the selected concept object. Amended Claim 31 also describes how concept objects related to a selected concept object can be associated by using a symbol that is positioned along a geometrical ray originating from the first image comprising the first concept object. The Cerveri reference does not provide a multi-level data structure interface that displays related

concept objects in predefined geometric orientations that are dependent on their relationship with a selected concept object, as recited in amended independent Claim 31.

## The White Reference

The Examiner admits that the Neshatfar reference does not disclose receiving input for one of modifying, removing or creating relationships between concept objects. To make up for this deficiency of the Neshatfar reference, the Examiner relies upon the White reference.

The White reference in Figure 9 illustrates a graphical user interface GUI 900 for creating and updating a relation between objects such as a relationship between one or more subject objects and one or more direct objects. The GUI 900 includes a first window 901 that enables a user to create or specify an object. In the example illustrated in Figure 9, the object that is created is a "sales report 3" as the subject object of a relation.
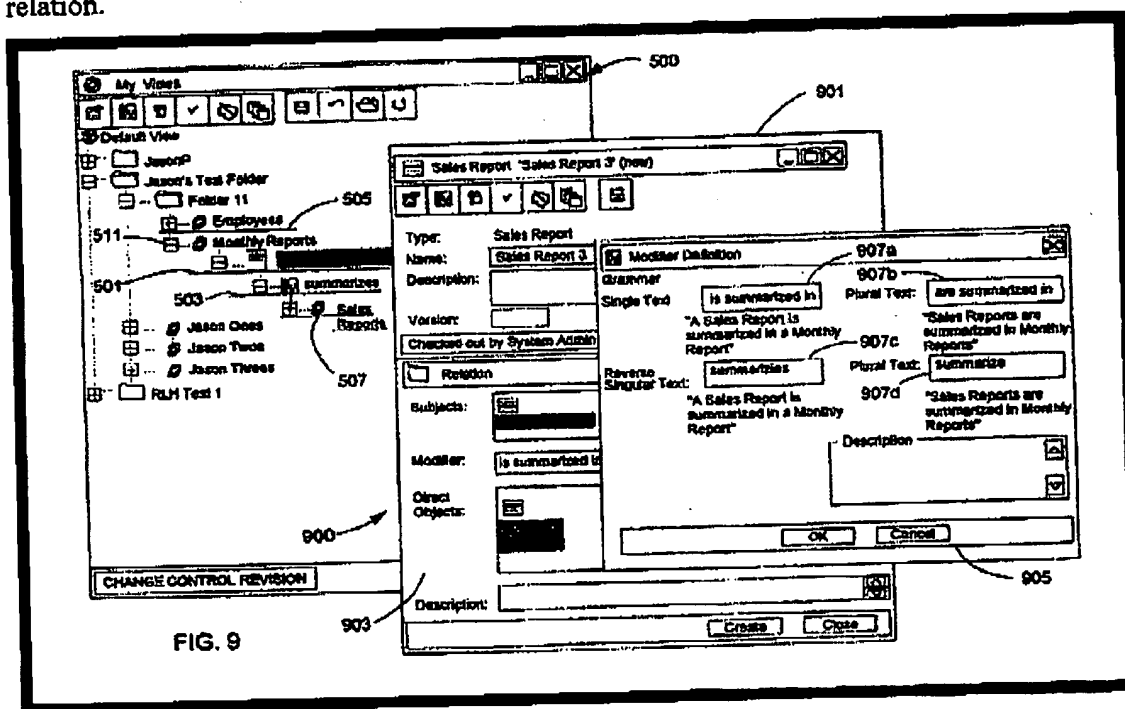


FIG. 9

The first window 901 is invoked via user interaction with a view window 500. The GUI 900 includes a second window that a enables a user to specify one or more direct objects (in this example, the object "monthly report 1" is specified). Bi-directional

-22-

modifier text is specified that represents the relationship between the specified subject object (the "sales report 3") and the specified direct object (the "monthly report 1").

GUI 900 also include a third window 905 that enables a user to input arbitrary text strings for creating or updating the bi-directional text representing the relationships between subject objects and direct objects. The third window 905 also includes an input frame 907a for inputting a first singular text of a relation such as text that characterizes the semantics of the relationship of a singular subject object to one or more direct objects of a relation. See the White reference, column 21, lines 1-21.

Similar to the Neshatfar reference, the White reference does not provide any teaching of positioning all second, third, and fourth images in locations around the first image such that the first image comprises a geometrical center relative to all symbols present in the first area; and displaying an editable text list in a second area in response to objects selected in the first area, the text list comprising information relating to at least one of a selected health language concept object, parent concept object, child concept object, and a lateral concept object, as recited in amended independent Claim 31.

## The Dome Reference

The Examiner admits that the Cerveri reference does not provides any teaching of attributes of a selected concept object in a second viewing area in which an attribute is a billing code. To make up for this billing code deficiency of the Cerveri reference, the Examiner relies upon the Dome reference.

Figure 3G of the Dome reference illustrates an interactive program display that is generated in response to a user clicking on any CPT code 152 listed in the codes field on the bottom right of the screen display. See Figure 3G of the Dome reference reproduced below.
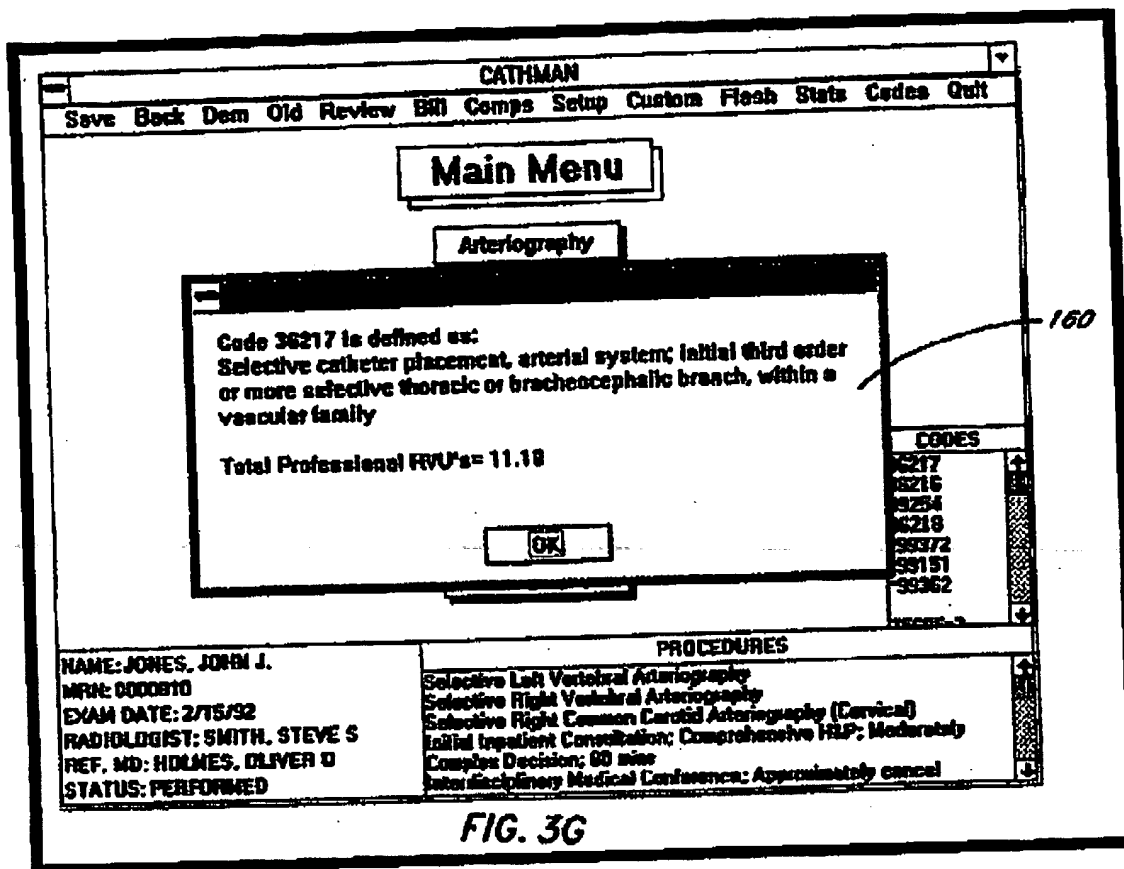
-23-

**FIG. 3G**

The interactive program of the Dorne reference displays a dialog box 160 containing the selected CPT code, as well as the CPT description for the APT code and a total professional RVU value for that code. Specifically, Figure 3G illustrates a dialog box that is displayed by the interactive program if a user clicks on the 36217 code in the displayed codes field 156. The displayed codes field 156 is positioned on the bottom right of the screen display illustrated above. See the Dorne reference, column 7, line 17-24.

Similar to the Cerveri reference, the Dorne reference does not provide a multi-level data structure interface that displays related concept objects in predefined geometric orientations that are dependent on their relationship with a selected concept object. Instead, like the Cerveri reference, the Dorne reference displays information in a conventional manner in which related text is merely listed in a new window that is opposite to positioning all second, third, and fourth images in locations around the first

-24-

Application Serial No. 09/829,461

image such that the first image comprises a geometrical center relative to all symbols present in the first area, as recited in amended independent Claim 31.

## Withdrawal of Rejection for Independent Claim 31

In light of the differences between Claim 31 and the Neshatfar, Cerveri, White, and Dorne references, one of ordinary skill in the art recognizes that these prior art references, alone or in combination, cannot anticipate or render obvious the recitations as set forth in amended independent Claim 31. Accordingly, reconsideration and withdrawal of the rejection of Claim 31 are respectfully requested.

## Independent Claim 42

The rejection of Claim 42 is respectfully traversed. It is respectfully submitted that the Neshatfar, Cerveri, White, and Dorne references, fail to describe, teach, or suggest the combination of a (1) computer; (2) a display communicably connected to the computer; (3) a memory communicably connected to the computer for storing the multi-level data structure; (4) a computer program resident on the computer for: (5) selecting a health language concept object stored in the multi-level data structure, (6) displaying a first image in a first window comprising an alphanumeric string representing the selected health language concept object on the display, (7) displaying one or more second images on the display and along one or more respective geometrical rays originating from a central region of the first image, each second image comprising an alphanumeric string representing a parent concept object of the selected health language concept object and displaying a first symbol on the display along each respective geometrical ray originating from the central region of the first image and illustrating an association between each second image and the first image, (8) if the selected health language concept object has one or more child concept objects, displaying one or more third images on the display and along one or more respective geometrical rays originating from a central region of the first image, each third image comprising an alphanumeric string representing a child concept object of the selected health language concept object and displaying a second symbol on the display along each respective geometrical ray originating from the central region of the first image and illustrating an association between each third image and the

-25-

first image, (9) if the selected health language concept object has one or more lateral concept objects, displaying one or more fourth images on the display and along one or more respective geometrical rays originating from a central region of the first image, each fourth image comprising an alphanumeric string representing a lateral concept object of the selected health language concept object and displaying a third symbol on the display along each respective geometrical ray originating from the central region of the first image and illustrating an association between each fourth image and the first image; (10) positioning all second, third, and fourth images in locations around the first image such that the first image comprises a geometrical center in the first window relative to all symbols on the display; (11) displaying an editable text list in a second window in response to objects selected in the first window, the text list comprising information relating to at least one of a selected health language concept object, parent concept object, child concept object, and a lateral concept object; and (12) receiving input for one of modifying, removing, and creating relationships between concept objects, as recited in amended Claim 42.

Similar to the analysis of independent Claim 31, the Neshatfar, Cerveri, White, and Dorne references do not provide any teaching of positioning all second, third, and fourth images in locations around the first image such that the first image comprises a geometrical center in the first window relative to all symbols on the display; and displaying an editable text list in a second window in response to objects selected in the first window, the text list comprising information relating to at least one of a selected health language concept object, parent concept object, child concept object, and a lateral concept object, as recited in amended independent Claim 42.

In light of the differences between Claim 42 and the references mentioned above, one of ordinary skill in the art recognizes that the prior art references, alone or in combination, cannot anticipate or render obvious the recitations as set forth in amended independent Claim 42. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

-26-

## Independent Claim 61

The rejection of Claim 61 is respectfully traversed. It is respectfully submitted that the Neshatfar, Cerveri, White, and Dorne references, fail to describe, teach, or suggest the combination of selecting (1) a medical concept object stored in the multi-level data structure; (2) displaying a first image comprising the selected medical concept object in a first region; (3) displaying one or more second images, (5) each second image comprising a parent medical concept object of the selected medical concept object; (6) displaying a first graphical element representing an association between each second image to the first image; (7) if the selected medical concept object has one or more child medical concept objects, displaying one or more third images along one or more respective geometrical rays originating from a central region of the first image, (8) each third image comprising one of the child medical concept objects of the selected medical concept object, and displaying a second graphical element along each respective geometrical ray originating from the central region of the first image and representing an association between each third image and the first image; (9) if the selected concept object has one or more lateral medical concept objects, displaying one or more fourth images along one or more respective geometrical rays originating from a central region of the first image, (10) each fourth image comprising a lateral medical concept object of the selected concept object, and displaying a third graphical element along each respective geometrical ray originating from the central region of the first image and representing an association between each fourth image and the first image; (11) positioning all second, third, and fourth images in locations around the first image such that the first image comprises a geometrical center relative to all graphical elements present in the first region; (12) displaying an editable text list in a second region in response to objects selected in the first region, the text list comprising information relating to at least one of a selected medical concept object, parent medical concept object, child medical concept object, and a lateral medical concept object; and (13) receiving input for one of: (14) modifying a relationship between two or more medical concept objects; (15) removing a relationship between two or more medical concept objects; (16) creating a relationship between two or more medical concept objects; and (17) creating new medical concept objects, as recited in amended Claim 61.

-27-

Similar to the analysis of independent Claim 31, neither the Neshatfar, Cerveri, White, nor the Dome reference provide any teaching of positioning all second, third, and fourth images in locations around the first image such that the first image comprises a geometrical center relative to all graphical elements present in the first region; and displaying an editable text list in a second region in response to objects selected in the first region, the text list comprising information relating to at least one of a selected medical concept object, parent medical concept object, child medical concept object, and a lateral medical concept object, as recited in amended Claim 61.

In light of the differences between Claim 61 and the Neshatfar, Cerveri, White, and Dome references mentioned above, one of ordinary skill in the art recognizes that the prior art references, alone or in combination, cannot anticipate or render obvious the recitations as set forth in amended independent Claim 61. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.


Independent Claim 66

It is respectfully submitted that the Neshatfar, Cerveri, White, and Dome references, fail to describe, teach, or suggest the combination of (1) receiving a selection of a first health language concept; (2) in response to receiving the selection, displaying a first concept object in a central region of a first area, the first concept object corresponding to the selected first health language concept; (3) displaying one or more second health language concept objects in a radial manner relative to the first health language concept object such that the one or more other second health language concept objects are positioned outside and around the central region occupied by the first health language concept object along one or more respective visible geometrical rays originating from the central region of the first image, the first health language concept object comprising a geometrical center for all visible geometrical rays; (4) displaying an editable text list in a second area in response to objects selected in the first area, the text list comprising information relating to at least one of a selected first health language concept object and second health language concept object; and (5) receiving input for one of: (6) modifying a relationship between two or more health language concept objects; (7) creating a relationship between two or more health language concepts objects;

-28-

(8) removing a relationship between two or more health language concept objects; and (9) creating a new health language concept object, as recited in new Claim 66.

Similar to independent Claim 31, neither the Neshatfar, Cerveri, White, nor the Dorne reference provide a teaching of displaying one or more second health language concept objects in a radial manner relative to the first health language concept object such that the one or more other second health language concept objects are positioned outside and around the central region occupied by the first health language concept object along one or more respective visible geometrical rays originating from the central region of the first image, the first health language concept object comprising a geometrical center for all visible geometrical rays; and displaying an editable text list in a second area in response to objects selected in the first area, the text list comprising information relating to at least one of a selected first health language concept object and second health language concept object, as recited in independent Claim 66.

In light of the differences between new Claim 66 and the Neshatfar, Cerveri, White, and Dorne references mentioned above, one of ordinary skill in the art recognizes that the prior art references, alone or in combination, cannot anticipate or render obvious the recitations as set forth in amended independent Claim 66. Accordingly, consideration and an indication of allowability for this claim are respectfully requested.


Independent Claim 74

It is respectfully submitted that the Neshatfar, Cerveri, White, and Dorne references, fail to describe, teach, or suggest the combination of (1) a computer; (2) a display communicably connected to the computer; (3) a memory communicably connected to the computer for storing the two or more nomenclatures; (4) a computer program resident on the computer for: (5) mapping a first health language concept object of to a first area on the display; (6) mapping one or more second health language concept objects to the first area and along respective geometrical rays originating from a central region of the first concept object and the visible geometrical rays defining a perimeter that circumscribes the first concept object; (7) mapping one or more first symbols to the area and along the respective geometrical rays originating from a central region of the first health language concept object, the first health language concept object defining a

-29-

geometrical center for all first symbols; (8) displaying an editable text list in a second area in response to objects selected in the first area, the text list comprising information relating to at least one of a selected first health language concept object and second health language concept object; (9) receiving input for creating a new health language concept object having a relationship with an existing health language concept object; (10) associating the relationship with a second symbol; (11) mapping the new health language concept object to the first area; and (12) mapping the second symbol to first the area along a respective geometrical ray originating from the central region of and between the new concept object and one of a the first health language concept object and a second health language concept object, as recited in amended independent Claim 74.

Similar to independent Claim 31, neither the Neshatfar, Cerveri, White, nor the Dorne reference provide a teaching of mapping one or more first symbols to the area and along the respective geometrical rays originating from a central region of the first health language concept object, the first health language concept object defining a geometrical center for all first symbols; and displaying an editable text list in a second area in response to objects selected in the first area, the text list comprising information relating to at least one of a selected first health language concept object and second health language concept object, as recited in amended independent Claim 74.

In light of the differences between amended independent Claim 74 and the Neshatfar, Cerveri, White, and Dorne references mentioned above, one of ordinary skill in the art recognizes that the prior art references, alone or in combination, cannot anticipate or render obvious the recitations as set forth in amended independent Claim 74. Accordingly, consideration and an indication of allowability for this claim are respectfully requested.


Dependent Claims 32-41, 43-49, 62-65, 67-73, and 75-78

The Applicants respectfully submit that the above-identified dependent claims are allowable because the independent claims from which they depend are patentable over the cited references. The Applicants also respectfully submit that the recitations of dependent Claims 32-41, 43-49, and 62-65, 67-73, and 75-78 are of patentable
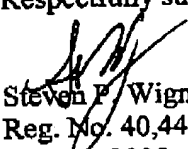
-30-

significance.  Accordingly, reconsideration and withdrawal of the rejections of Claims 32-41, 43-49, and 62-65 are respectfully requested.

## CONCLUSION

The foregoing is submitted as a full and complete response to the Office Action mailed on February 9, 2005. The Applicant and the undersigned thank Examiner Pham for the consideration of these remarks. The Applicant has submitted remarks to traverse the rejections of Claims 31-50, and 61-65 and to distinguish new Claims 66-78 from the prior art of record. The Applicant respectfully submits that the present application is in condition for allowance. Such Action is hereby courteously solicited.

If any issues remain that may be resolved by telephone, the Examiner is requested to call the undersigned at 404.572.2884.

Respectfully submitted,

Steven P. Wigmore
Reg. No. 40,447
July 11, 2005

King & Spalding LLP
45th Floor
191 Peachtree Street, N.E.
Atlanta, Georgia 30303
404.572.4600
K&S Docket: 10125-105001